

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A base station transmission control method applied to a cellular system, ~~wherein;~~ the method comprising:

~~a mobile station sets~~ setting up a connection by a mobile station to one or more base stations, wherein the mobile station:

~~measures the reception quality of the pilot signal~~ signals transmitted therefrom,
from the one or more connected base stations;

~~and in accordance with the results of this measurement,~~ designates one or more of
the connected base stations with which a connection has been set up (hereinafter termed
“connected base stations”) ~~as a transmitting base station~~ stations based on results of the
measurement; ~~and~~

~~sends notification~~ notifies of this to the one or more connected base stations;
about the one or more designated transmitting connected base stations, ~~when a connected base~~
~~station has been designated as a transmitting base station,~~ it transmits wherein the one or more
transmitting connected base stations:

transmit one or more dedicated physical control channel signals and one or more
dedicated physical data channel signals to the ~~aforementioned~~ mobile station;

measure ~~measures the uplink reception quality;~~ ~~and~~

~~transmits, multiplexed in the dedicated physical control channel signal, a~~
transmission power control ~~signal~~ signals multiplexed in the dedicated physical control channel
signals serving to control the transmission power of the mobile station so that the aforementioned
reception quality approaches a prescribed target quality; and

wherein one or more connected base stations not designated as transmitting base
stations halt transmission of the dedicated physical data channel signals and decide whether or
not to transmit the dedicated physical control channel signals in accordance with the uplink
reception quality; and

wherein the mobile station receives one or more dedicated physical control
channel signals transmitted from connected base stations and controls its own transmission
power in accordance therewith;

~~which is characterized in that;~~

~~when a connected base station has been designated as a non-transmitting base station, it~~
~~halts transmission of the dedicated physical data channel signal and decides whether or not to~~
~~transmit the dedicated physical control channel signal in accordance with the uplink reception~~
~~quality.~~

2. (original): The base station transmission control method claimed in claim 1, wherein;
the mobile station decreases its transmission power if at least one of the one or more
transmission power control signals that have been received is a signal instructing a decrease in
transmission power; and

the non-transmitting base station transmits a dedicated physical control channel signal if the uplink reception quality is higher than a prescribed target quality, and otherwise halts transmission of the dedicated physical control channel signal.

3. (original): A base station transmission control method applied to a cellular system wherein;

a mobile station sets up a connection to one or more base stations, measures the reception quality of the pilot signal transmitted therefrom, and in accordance with the results of this measurement, designates one or more of the connected base stations as a transmitting base station, and sends notification of this to the connected base stations;

when a connected base station has been designated as a transmitting base station, it transmits dedicated physical control channel signals and dedicated physical data channel signals to the aforementioned mobile station, measures the uplink reception quality, and transmits, multiplexed in the dedicated physical control channel signal, a transmission power control signal serving to control the transmission power of the mobile station so that the aforementioned reception quality approaches a prescribed target quality; and

the mobile station receives one or more dedicated physical control channel signals transmitted from connected base stations and controls its own transmission power in accordance therewith;

which is characterized in that;

when a connected base station has been designated as a non-transmitting base station, it halts transmission of the dedicated physical data channel signal and decides whether or not to

transmit the dedicated physical control channel signal in accordance with the contents of the transmission power control signal.

4. (original): The base station transmission control method claimed in claim 3, wherein;
the mobile station decreases its transmission power if at least one of the one or more transmission power control signals that have been received is a signal instructing a decrease in transmission power; and

the non-transmitting base station transmits a dedicated physical control channel signal if the contents of the transmission power control signal instruct a decrease in the transmission power of the mobile station, and otherwise halts transmission of the dedicated physical control channel signal.

5. (currently amended): A base station transmission control method applied to a cellular system, ~~wherein;~~comprising:

~~a mobile station sets~~setting up a connection by a mobile station to one or more base stations, wherein the mobile station:

measures ~~the~~ reception quality of ~~the~~ pilot ~~signal~~ signals transmitted ~~therefrom~~ from the one or more connected base stations; ~~and in accordance with the results of this measurement,~~

designates one or more of the connected base stations as a transmitting base station; in accordance with results of the measurement; and

sends notification of which connected base stations are transmitting base stations ~~this to~~ the one or more connected base stations;

wherein the one or more a-connected base stations measure ~~station measures the uplink~~
reception quality and ~~transmits~~ transmit a transmission power control signal ~~serving to control~~
~~the transmission power of the mobile station so that the aforementioned reception quality~~
approaches a prescribed target quality; and

the connected base stations not designated as transmitting base station decide whether or
not to transmit, in accordance with an estimated value of a rate of movement of the mobile
station; and

the mobile station receives one or more transmission power control signals transmitted
from the connected base stations and controls its own transmission power in accordance
therewith;

~~which is characterized in that;~~

~~when a connected base station has been designated as a non-transmitting base station, it~~
~~decides whether or not to transmit, in accordance with the estimated value of the rate of~~
~~movement of the mobile station.~~

6. (original): The base station transmission control method of claim 5, wherein;
a transmitting base station transmits dedicated physical control channel signals and
dedicated physical data channel signals to the mobile station; and
a non-transmitting base station halts transmission of the dedicated physical control
channel signal and the dedicated physical data channel signal if the estimated velocity of the
mobile station is higher than a prescribed threshold, whereas if the estimated velocity is lower
than the prescribed threshold, it halts transmission of the dedicated physical data channel signal

and decides whether or not to transmit the dedicated physical control channel signal in accordance with the quality of the uplink.

7. (original): A base station transmission control method claimed in claim 6, wherein; the mobile station decreases its transmission power if at least one of the one or more transmission power control signals that have been received is a signal instructing a decrease in transmission power; and wherein;

when the estimated velocity of the mobile station is lower than the prescribed threshold, the non-transmitting base station transmits the dedicated physical control channel signal if the uplink reception quality is higher than a prescribed target quality, and otherwise halts transmission of the dedicated physical control channel signal.

8. (currently amended): The base station transmission control method claimed in claim 5, wherein;

the transmitting base station transmits dedicated physical control channel signals and dedicated physical data channel signals to the mobile station; ~~and wherein~~

if the estimated velocity of the mobile station is higher than a prescribed threshold, the non-transmitting base station halts transmission of the dedicated physical control channel signal and the dedicated physical data channel signal; if the estimated velocity of the mobile station is higher than a prescribed threshold, whereas and

if the estimated velocity is lower than the prescribed threshold, the non-transmitting base station ~~it~~ halts transmission of the dedicated physical data channel signal and decides whether or

not to transmit the dedicated physical control channel signal in accordance with the contents of the transmission power control signal.

9. (original): The base station transmission control method claimed in claim 8, wherein;
the mobile station decreases its transmission power if at least one of the one or more transmission power control signals that have been received is a signal instructing a decrease in transmission power; and wherein;

when the estimated velocity of the mobile station is lower than the prescribed threshold, a non-transmitting base station transmits the dedicated physical control channel signal if the contents of the transmission power control signal instruct a decrease in the transmission power of the mobile station, and otherwise halts transmission of the dedicated physical control channel signal.

10. (currently amended): A cellular system ~~which comprises~~comprising at least one mobile station ~~stations~~ and one or more base stations wherein;

the at least one ~~a~~ mobile station sets up a connection to the one or more base stations, wherein the at least one mobile station:

measures the reception quality of ~~the pilot signal~~ signals transmitted ~~therefrom, and from~~ the one or more connected base stations;

~~in accordance with the results of this measurement,~~ designates one or more of the connected base stations as a transmitting base station in accordance with the results of the measurement; ~~and~~

sends notification of ~~this~~ the transmitting base station to the connected base stations;
wherein when a connected base station has been designated as a the transmitting base station; ~~it~~
transmits dedicated physical control channel signals and dedicated physical data channel signals to the ~~aforementioned~~ mobile station;
measures the uplink reception quality; ~~and~~
transmits, multiplexed in the dedicated physical control channel signal, a transmission power control signal ~~serving~~ to control the transmission power of the mobile station so that the ~~aforementioned~~ reception quality approaches a prescribed target quality; ~~and~~
wherein a non-transmitting connected base station halts transmission of the dedicated physical data channel signal and decides whether or not to transmit the dedicated physical control channel signal in accordance with the uplink reception quality; and
wherein the mobile station receives one or more dedicated physical control channel signals transmitted from connected base stations and controls its own transmission power in accordance therewith;
~~which is characterized in that;~~
~~when the connected base station has been designated as a non-transmitting base station, it halts transmission of the dedicated physical data channel signal and decides whether or not to transmit the dedicated physical control channel signal in accordance with the uplink reception quality.~~

11. (original): The cellular system claimed in claim 10, wherein;

the mobile station decreases its transmission power if at least one of the one or more transmission power control signals that have been received is a signal instructing a decrease in transmission power; and

a non-transmitting base station transmits a dedicated physical control channel signal when the uplink reception quality is higher than a prescribed target quality, and otherwise halts transmission of the dedicated physical control channel signal.

12. (original): A cellular system which comprises mobile stations and base stations wherein;

a mobile station sets up a connection to one or more base stations, measures the reception quality of the pilot signal transmitted therefrom, and in accordance with the results of this measurement, designates one or more of the connected base stations as a transmitting base station, and sends notification of this to the connected base stations;

when a connected base station has been designated as a transmitting base station, it transmits dedicated physical control channel signals and dedicated physical data channel signals to the aforementioned mobile station, measures the uplink reception quality, and transmits, multiplexed in the dedicated physical control channel signal, a transmission power control signal serving to control the transmission power of the mobile station so that the aforementioned reception quality approaches a prescribed target quality; and

the mobile station receives one or more dedicated physical control channel signals transmitted from connected base stations and controls its own transmission power in accordance therewith;

which is characterized in that;

when a connected base station has been designated as a non-transmitting base station, it halts transmission of the dedicated physical data channel signal and decides whether or not to transmit the dedicated physical control channel signal in accordance with the contents of the transmission power control signal.

13. (original): The cellular system claimed in claim 12, wherein;

the mobile station decreases its transmission power if at least one of the one or more transmission power control signals that have been received is a signal instructing a decrease in transmission power; and

the non-transmitting base station transmits a dedicated physical control channel signal when the contents of the transmission power control signal instruct a decrease in the transmission power of the mobile station, and otherwise halts transmission of the dedicated physical control channel signal.

14. (currently amended): A cellular system ~~which comprises~~comprising mobile stations and base stations wherein; a mobile station;

sets up a connection to one or more base stations;

measures ~~the~~ reception quality of ~~the~~ pilot signal signals transmitted ~~therefrom~~from the
connected base stations; and

~~in accordance with the results of this measurement,~~ designates one or more of the connected base stations as a transmitting base station in accordance with the results of this measurement; and;

sends notification of ~~this~~ the transmitting base station to the connected base stations;

wherein a connected base station measures ~~the~~ uplink reception quality and transmits a transmission power control signal serving to control ~~the~~ transmission power of the mobile station so that the ~~aforementioned~~ reception quality approaches a prescribed target quality; and

a connected non-transmitting base station decides whether or not to transmit in accordance with the estimated value of the rate of movement of the mobile station; and

the mobile station receives one or more transmission power control signals transmitted from connected base stations and controls its own transmission power in accordance therewith;

~~which is characterized in that;~~

~~when a connected base station has been designated as a non-transmitting base station, it decides whether or not to transmit, in accordance with the estimated value of the rate of movement of the mobile station.~~

15. (original): The cellular system claimed in claim 14, wherein;
the transmitting base station transmits dedicated physical control channel signals and dedicated physical data channel signals to the mobile station; and
the non-transmitting base station halts transmission of the dedicated physical control channel signal and the dedicated physical data channel signal if the estimated velocity of the mobile station is higher than a prescribed threshold, whereas if the estimated velocity is lower than the prescribed threshold, it halts transmission of the dedicated physical data channel signal and decides whether or not to transmit the dedicated physical control channel signal in accordance with the quality of the uplink.

16. (original): The cellular system claimed in claim 15, wherein;
the mobile station decreases its transmission if at least one of the one or more transmission power control signals that have been received is a signal instructing a decrease in transmission power; and
when the estimated velocity of the mobile station is lower than the prescribed threshold, the non-transmitting base station transmits the dedicated physical control channel signal if the uplink reception quality is higher than a prescribed target quality, and otherwise halts transmission of the dedicated physical control channel signal.

17. (original): The cellular system claimed in claim 14, wherein;

the transmitting base station transmits dedicated physical control channel signals and dedicated physical data channel signals to the mobile station; and

the non-transmitting base station halts transmission of the dedicated physical control channel signal and the dedicated physical data channel signal if the estimated velocity of the mobile station is higher than a prescribed threshold, whereas if the estimated velocity is lower than the prescribed threshold, it halts transmission of the dedicated physical data channel signal and decides whether or not to transmit the dedicated physical control channel signal in accordance with the contents of the transmission power control signal.

18. (original): The cellular system claimed in claim 17, wherein;

the mobile station decreases its transmission power if at least one of the one or more transmission power control signals that have been received is a signal instructing a decrease in transmission power; and

when the estimated velocity of the mobile station is lower than the prescribed threshold, the non-transmitting base station transmits the dedicated physical control channel signal if the contents of the transmission power control signal instruct a decrease in the transmission power of the mobile station, and otherwise halts transmission of the dedicated physical control channel signal.

19. (currently amended): A base station ~~which~~ configured to transmit ~~transmits~~ a pilot signal at a prescribed power; ~~receives~~ and receive information relating to transmitting base stations from a mobile station, ~~which~~ wherein the mobile station has:

set up a connection to one or more base stations; _;

measured ~~the~~ reception quality of ~~the~~ pilot signal ~~signals~~ transmitted therefrom, from the one or more connected base stations; and in accordance with the results of this measurement,

designated one or more of the connected base stations as a transmitting base station in accordance with results of the measurement; _; and

sent notification of ~~this~~ the transmitting base station to the connected base stations; and

wherein when the base station in question has been designated as a transmitting base station; _;

transmits dedicated physical control channel signals and dedicated physical data channel signals to the ~~aforementioned~~ mobile station; _;

measures ~~the~~ uplink reception quality; _; and

transmits, multiplexed in the dedicated physical control channel signal, a transmission power control signal serving to control ~~the~~ transmission power of the mobile station so that the ~~aforementioned~~ reception quality approaches a prescribed target quality;

~~which is characterized in that;~~

wherein when it is designated as a non-transmitting base station, ~~it~~ halts transmission of the dedicated physical data channel signal and decides whether or not to transmit the dedicated physical control channel signal in accordance with the uplink reception quality.

20. (original): The base station claimed in claim 19, wherein when it is a non-transmitting base station, it transmits a dedicated physical control channel signal if the uplink reception quality is higher than a prescribed target quality, and otherwise halts transmission of the dedicated physical control channel signal.

21. (original): A base station which transmits a pilot signal at a prescribed power; receives information relating to transmitting base stations from a mobile station which has set up a connection to one or more base stations, measured the reception quality of the pilot signal transmitted therefrom, and in accordance with the results of this measurement, designated one or more of the connected base stations as a transmitting base station, and sent notification of this to the connected base stations; and when the base station in question has been designated as a transmitting base station, transmits dedicated physical control channel signals and dedicated physical data channel signals to the aforementioned mobile station, measures the uplink reception quality, and transmits, multiplexed in the dedicated physical control channel signal, a transmission power control signal serving to control the transmission power of the mobile station so that the aforementioned reception quality approaches a prescribed target quality;

which is characterized in that;

when it is designated as a non-transmitting base station, it halts transmission of the dedicated physical data channel signal and decides whether or not to transmit the dedicated physical control channel signal in accordance with the contents of the transmission power control signal.

22. (original): The base station claimed in claim 21, wherein when it is a non-transmitting base station, it transmits a dedicated physical control channel signal if the contents of the transmission power control signal instruct a decrease in the transmission power of the mobile station, and otherwise halts transmission of the dedicated physical control channel signal.

23. (currently amended): A base station ~~which transmits~~configured to transmit a pilot signal at a prescribed power ; ~~receives~~and receive information relating to transmitting base stations from a mobile station, ~~which~~wherein the mobile station has:

set up a connection to one or more base stations;_;

measured ~~the~~ reception quality of ~~the pilot signal~~signals transmitted from the one or more connected base stations; ~~therefrom~~, and in accordance with the results of this measurement,

designated one or more of the connected base stations as a transmitting base station in accordance with results of the measurement_;_; and

sent notification of ~~this~~the transmitting base station to the connected base stations;_; ~~and~~, wherein the transmitting base station:

measures ~~the~~ uplink reception quality and transmits a transmission power control signal ~~serving~~ to control ~~the~~ transmission power of the mobile station so that the aforementioned reception quality approaches a prescribed target quality; and

~~which is characterized in that~~;

wherein ~~when it is designated as~~ a non-transmitting base station, ~~it~~ decides whether or not to transmit, in accordance with the estimated value of the rate of movement of the mobile station.

24. (original): The base station claimed in claim 23, wherein;

when it is a transmitting base station, it transmits dedicated physical control channel signals and dedicated physical data channel signals to the mobile station; and

when it is a non-transmitting base station, it halts transmission of the dedicated physical control channel signal and the dedicated physical data channel signal if the estimated velocity of the mobile station is higher than a prescribed threshold, whereas if the estimated velocity is lower than the prescribed threshold, it halts transmission of the dedicated physical data channel signal and decides whether or not to transmit the dedicated physical control channel signal in accordance with the quality of the uplink.

25. (original): The base station claimed in claim 24, wherein;

when it is a non-transmitting base station and the estimated velocity of the mobile station is lower than the prescribed threshold, it transmits the dedicated physical control channel signal if the uplink reception quality is higher than a prescribed target quality, and otherwise halts transmission of the dedicated physical control channel signal.

26. (original): The base station claimed in claim 23, wherein;

when it is a transmitting base station, it transmits dedicated physical control channel signals and dedicated physical data channel signals to the mobile station; and

when it is a non-transmitting base station, it halts transmission of the dedicated physical control channel signal and the dedicated physical data channel signal if the estimated velocity of the mobile station is higher than a prescribed threshold, whereas if the estimated velocity is

lower than the prescribed threshold, it halts transmission of the dedicated physical data channel signal and decides whether or not to transmit the dedicated physical control channel signal in accordance with the contents of the transmission power control signal.

27. (original): The base station claimed in claim 26, wherein;

when it is a non-transmitting base station and the estimated velocity of the mobile station is lower than the prescribed threshold, it transmits the dedicated physical control channel signal if the contents of the transmission power control signal instruct a decrease in the transmission power of the mobile station, and otherwise halts transmission of the dedicated physical control channel signal.

28. (canceled).

29. (currently amended): ~~The communication method claimed in claim 28, A~~
communication method wherein mobile stations and base stations perform soft handoff, the
method comprising:

for a base station transmitting only a control signal, transmitting the control signal to a
mobile station only if signal quality from the mobile station is higher than a target quality;

wherein the mobile station transmits information relating to its own velocity and the base station halts transmission of the control signal if said velocity exceeds a prescribed value.

30. (currently amended): ~~The communication method claimed in claim 28, A~~
communication method wherein mobile stations and base stations perform soft handoff, the
method comprising:

for a base station transmitting only a control signal, transmitting the control signal to a
mobile station only if signal quality from the mobile station is higher than a target quality;

wherein the base station estimates ~~the~~ velocity of the mobile station on the basis of ~~the~~
fading of a signal from the mobile station, and halts transmission of the control signal if said
velocity exceeds a prescribed value.

31. (canceled).

32. (currently amended): ~~The communication method claimed in claim 31, A~~
communication method wherein mobile stations and base stations perform soft handoff, the
method comprising:

for a base station transmitting only a control signal, transmitting the control signal to a
mobile station only if signal quality from the mobile station is higher than a target quality;

wherein the mobile station transmits information relating to its own velocity and the base
station halts transmission of the control signal if said velocity exceeds a prescribed value.

33. (currently amended): ~~The communication method claimed in claim 31, A~~
communication method wherein mobile stations and base stations perform soft handoff, the
method comprising:

for a base station transmitting only a control signal, transmitting the control signal to a
mobile station only if signal quality from the mobile station is higher than a target quality;

wherein the mobile station transmits information relating to its own velocity and the base
station halts transmission of the control signal if said velocity exceeds a prescribed value;

wherein the base station estimates the velocity of the mobile station on the basis of the
fading of a signal from the mobile station, and halts transmission of the control signal if said
velocity exceeds a prescribed value.

34. (canceled).

35. (currently amended): ~~The base station claimed in claim 34, A base station capable~~
of performing soft handoff with a mobile station, wherein;

if the base station is transmitting only a control signal, the base station transmits the
control signal to a mobile station only if signal quality from the mobile station is higher than a
target quality;

wherein ~~it~~ the mobile station transmits information relating to its own velocity and the
base station halts transmission of the control signal if said velocity exceeds a prescribed value.

36. (currently amended): ~~The base station claimed in claim 34,~~ A base station capable of performing soft handoff with a mobile station; wherein;

if the base station is transmitting only a control signal, the base station transmits the control signal to a mobile station only if signal quality from the mobile station is higher than a target quality;

wherein the base station ~~it~~ estimates ~~the~~ velocity of the mobile station on the basis of ~~the~~ fading of a signal from the mobile station, and halts transmission of the control signal if said velocity exceeds a prescribed value.